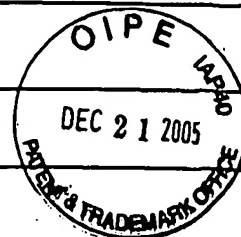


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U.S. DEPARTMENT OF COMMERCE
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Date Submitted to PTO: December 21, 2005

ATTY DOCKET NO.
2003_1571SERIAL NO.
10/694,343APPLICANT
Mitsuaki OSHIMAFILING DATE
October 28, 2003GROUP
2631

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/AE/	AA	4,597,090	6-24-86	Forney, Jr.			
	AB	4,077,021	2-28-78	Csajka et al.			
	AC	2005/0084750	4-21-05	Wang et al.			
	AD	2005/0058633	3-17-05	Epstein et al.			
	AE	2005/0922922					
	AF	4,918,437	4-17-90	Jasinski et al.			
	AG	5,023,889	6-11-91	Divsalar et al.			
	AH	5,063,452	11-5-91	Higurashi			
	AI	5,124,852	6-23-92	Suwa et al.			
	AJ	5,136,380	8-4-92	Cho			
	AK	5,146,335	9-8-92	Kim et al.			
	AL	5,148,422	9-15-92	Sako et al.			
	AM	5,218,436	6-8-93	Sugiyama et al.			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO
		AN	2627574	CN				
		AO	1529838	EP			abstract	
		AP	1499725	CN			only abstract	
		AQ	2004-159207	JP			corresponds to AP	
		AR	1528854	EP			only abstract	
		AS	52118	UA			only abstract	
/AE/	AT	1569334	1-26-05	CN				x

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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DATE CONSIDERED 08/08/2007

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Date Submitted to PTO: October 28, 2003

ATTY DOCKET NO.
2003_1571SERIAL NO.
NEWAPPLICANT
Mitsuaki OSHIMAFILING DATE
October 28, 2003

GROUP

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AE	AA	5,311,550	5-10-94	Fouche et al.			
	AB	4,630,287	12-16-88	Armstrong			
	AC	4,271,627	6-2-81	Armstrong			
	AD	5,050,188	9-17-91	Dirr			
	AE	5,398,073	3-14-95	Wei			
	AF	5,452,015	9-19-95	Hulyalkar			
	AG	5,585,932	10-15-96	Citta et al.			
	AH	5,481,412	1-2-96	Bannai et al.			
AE	AI	3,909,721	9-30-75	Bussgang et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO
		0583431	4-23-90	EP				X
	AK	0485105	5-13-92	EP			X	
	AL	92/14343	8-20-92	WO			X	
	AM	89/08366	9-8-89	WO			X	
	AN	0031193	7-1-81	EP			X	

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	AO	Shinji Matsumoto et al., "200 Mb/s 16 QAM Digital Radio-Relay System Operating in 4 and 5 GHz Bands" Japan Telecommunications Review, January 1982, vol. 24, no. 1, pages 65-73.	
	AP	M. Pecot et al., "Compatible Coding of Television Images, Part 2. Compatible System", Signal Processing Image Communication, October 2, 1990, no. 3, pages 259-268.	
	AP	Mitsuaki Oshima, "Constellation Code Division Multiplex for Digital HDTV", IEEE, 1992, pages 1080-1082.	

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Date Submitted to PTO: October 28, 2003

ATTY DOCKET NO.
2003_1671SERIAL NO.
NEWAPPLICANT
Mitsuki OSHIMAFILING DATE
October 28, 2003

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AE	AA	4,227,152	10-7-80	Godard et al.			
	AB	4,525,846	6-25-85	Bremer et al.			
	AC	4,751,478	6-14-88	Yoshida			
	AD	4,891,806	1-2-90	Farias et al.			
	AE	4,903,125	2-20-90	Parker			
	AF	4,937,844	6-26-90	Kao			
	AG	5,164,963	11-17-92	Lawrence et al.			
	AH	5,555,275	9-1996	Oshima			
AE	AI	5,565,926	10-15-96	Bryan et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ	0311100	4-12-89	EP			X
	AK	0329158	8-23-89	EP			X
	AL	64-5135	1-10-89	JP			X
	AM	63-28145	2-5-88	JP			X
	AN	62-133842	6-17-87	JP			X

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	AO	Tricia Hill et al., "A Performance Study of NLG 64-State QAM", IEEE Transactions on Communications, vol. COM-31, June 1983, no. 6, pages 824-826.					
	AP	Hideki Ishio et al., "A Proposal of a Carrier Digital Transmission System Using Multi-Level APSK", pages 1-20.					
	AQ	Shannugam, "Digital and Analog Communication Systems" 1979, p. 272.					

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AE	AA	5,105,442	4-14-82	Wei			
	AB	4,048,572	9-13-77	Dogliotti et al.			
	AC	5,282,019	1-25-94	Basile et al.			
	AD	5,311,547	5-10-94	Wei			
	AE	5,267,021	11-30-93	Ramchandran et al.			
	AF	5,038,219	8-6-91	Yamashita et al.			
	AG	5,087,975	2-11-92	Citta et al.			
↓	AH	5,086,340	2-4-92	Citta et al.			
AE	AI	5,243,629	9-7-93	Wei			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO
	AJ	58 487667	12-1-78	JP			X	
	AK	0282298	9-14-88	Europe			X	
	AL	0392538	10-17-90	Europe			X	
	AM	0490552	6-17-92	Europe			X	
	AN	0506400	9-30-92	Europe			X	

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	AO	Khaled Fazel et al., Combined multilevel coding and multiresolution modulation, February 8, 1993, Pages 1031-1085					
↓	AP	P. Hoehner et al., Performance of an RCPC-Coded OFDM-based Digital Audio Broadcasting (DAB) System, IEEE Global Telecommunications Conference "Globecom '91", December 2-5, 1991, Vol. 1 of 3, Pages 2.1.1 - 2.1.7					
	AO	K. M. Uz et al., Combined multiresolution source coding and modulation for digital broadcast of HDTV, 1992, Pages 203-202					

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/AE/	AA	5,142,353	8-25-92	Kageyama et al.			
	AB	5,197,061	3-23-93	Halbert-Lassalle et al.			
	AC	5,291,289	3-1-94	Hulyalkar et al.			
	AD	5,166,924	11-24-92	Moose			
	AE	4,940,954	7-10-90	Aubert et al.			
	AF	5,128,758	7-7-92	Azadegan et al.			
	AG	5,038,402	8-6-91	Robbins			
	AH	5,638,112	6-10-97	Bestler et al.			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AI	0448492A1	9-25-91	Europe			X
	AJ	0485108A2	5-13-92	Europe			X
	AK	0525641A2	2-3-93	Europe			X
	AL	0540231A2	5-5-93	Europe			X
	AM	0531046A2	3-10-93	Europe			X

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	AN	K. M. Uz et al., Multiresolution Source and Channel Coding for Digital Broadcast of HDTV, 1992, Pages 61-69.
↓	AO	Nambi Seshadri et al., Multi-Level Block Coded Modulations with Unequal Error Protection for the Rayleigh Fading Channel, Vol. 4, No. 3, May-June 1993, Pages 325-334.
/AE/	AP	William F. Schreiber, Spread-Spectrum Television Broadcasting, SMPTE Journal, August 1992, Pages 538-549.

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/AE/	AA	5,063,445	11-5-91	Nishizawa et al.			
	AB	5,819,000	10-6-98	Oshima			
	AC	5,999,569	12-7-99	Oshima			
	AD	5,892,879	4-6-99	Oshima			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AE	7-99522	4-11-95	Japan			abstract
	AF	7-79415	3-20-95	Japan			abstract
	AG	5-75568	3-26-93	Japan			abstract
	AH	86-07223	12-4-86	WO			X
	AI	2 187 611	9-9-87	Great Britain			X
	AJ	85/04541	10-10-85	WO			X
	AK	04-196822	7-16-92	Japan			abstract
	AL	2-166979	6-27-90	Japan			abstract
	AM	64-74836	3-20-89	Japan			abstract
	AN	53-108215	9-20-78	Japan			abstract

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	AO	Martin Vetterli et al., Multiresolution Coding Techniques for Digital Television: A Review, Multidimensional Systems and Signal Processing, Volume 3, May 1992, Pages 161-187.
✓	AP	Ezio Biglieri et al., Introduction to Trellis-Coded Modulation with Applications, April 6, 1992, Pages 173-207.
/AE/	AQ	English Language Abstract of European Patent No. 93 30 7575

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*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/AE/	AA	4,636,876	1-13-87	Schwartz			
	AB	4,855,692	8-8-89	Kennard et al.			
	AC	4,873,701	10-10-89	Tretter			
	AD	4,958,360	9-18-90	Sari			
	AE	5,115,453	5-19-92	Calderbank et al.			
	AF	5,168,509	12-1-92	Nakamura et al.			
	AG	5,600,672	2-4-97	Oshima et al.			
	AH	6,049,651	4-11-00	Oshima			
	AI	6,256,357	7-3-01	Oshima			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AJ	0122805	10-24-84	EP			X	
	AK	63-180280	7-25-88	JP			abstract	
	AL	64-68144	3-14-89	Japan			abstract	
	AM	5-218978	8-27-93	Japan				X
	AN	3-69295	3-25-91	Japan				X

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	AO	Kazuhiko Nitadori, Synthesis of Multichannel Orthogonal VSB Signals by Quadrature Method, 1976 International Conference on Communications, June 14-16, 1976, Volume 1, Pages 3-25 - 3-29.
↓	AP	Thomas M. Cover, Broadcast Channels, IEEE Transactions on Information Theory, January 1972, Pages 2-14
/AE/	AQ	"Optimum Weighted PCM for Speech Signals", Sundberg, IEEE Transactions on Communications, Volume COM-26, No. 6, June 1978, Pages 872-881.

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/AE/	AA	5,170,413	12-8-92	Hess et al.			
	AB	5,214,656	5-25-93	Chung et al.			
	AC	4,800,426	1-24-89	Glenn			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
		AD	57-39629	Japan			abstract
		AE	58-161547	Japan			abstract
		AF	63-180222	Japan			abstract
		AG	92/22162	WO			X
		AH	2-94814	Japan			abstract
		AI	61-70861	Japan			abstract
		AJ	2-218279	Japan			abstract
		AK	2,095,435	Canada			X
		AL	91/20137	WO			X
		AM	2-141049	Japan			X
		AN	2-195732	Japan			abstract
		AO	5-167633	Japan			abstract
		AP	2-260726	Japan			X
/AE/		AQ	58-161427	Japan			abstract

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